# UNITED STATES PATENT AND TRADEMARK OFFICE

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| 09/902,515 | 07/09/2001 | Roger Collins | 05545P002 | 7416 |

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Thomas C. Webster
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA   90025-1026

| EXAMINER |
|---|
| CHEN, WENPENG |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2624 | |

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some *  c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)        4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)    5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2,4,5* .    6) ☐ Other: .

## *Claim Rejections - 35 USC § 102*

1.     The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

2.     Claims 1, 4-5, 9, 12, 14, 22 and 25-26 are rejected under 35 U.S.C. 102(b) as

being anticipated by Carr (US patent 5,293,379.)

a.     For Claims 1 and 4-5, Carr teaches a method for compressing a message

comprising:

-- identifying a first field and a second field within the message; (column 6, line 64 to

column 7, line 46; Figs. 5-6; The data are identified as a set of static, semi-static and dynamic

fields collected header fields that represents a collected first filed and user data that represent a

second field.)

-- applying a first set of code words to encode data in the first field; (column 6, line 64 to

column 7, line 46; Figs. 5-6; The set of static, semi-static and dynamic fields collected header

fields that represents a collected first filed is coded with header dictionary that has a first set of

code words.)

-- applying a second set of code words to encore data in the second field; (column 6, line

64 to column 7, line 46; Figs. 5-6; The user data that represent a second field are coded with a

user data dictionary that has a second set of code words.)

-- wherein the first field is an email header field and the second field is an email text

field; (column 1, lines 39-47; Fig. 5; A message transferred in a network is an email. The set of

static, semi-static and dynamic fields is an email header.)

-- wherein the first field is an address book field and the second field is an email message

field. (column 1, lines 39-47; Fig. 5; A message transferred in a network is an email. Carr

teaches that destination address and source address are included in the header data set. Therefore,

the header is considered as an address book field.)

     b.     For Claims 9, 12, and 14, Carr teaches a method comprising:

-- generating a first code word table containing code words for a plurality of character

strings found in a first message field; (column 6, line 64 to column 7, line 46; Figs. 5-6; The

generated header dictionary is the first code word table.)

-- generating a second code word table containing code words for a plurality of character

strings found in a second message field; (column 6, line 64 to column 7, line 46; Figs. 5-6; The

generated data dictionary is the second code word table.)

-- encoding character strings in the first field using the first code word table and character

strings in the second field using the second code word table; (column 6, line 64 to column 9, line

4; Figs. 5-9)

-- wherein the first field is an email address field; (column 1, lines 39-47; Fig. 5; A

message transferred in a network is an email. The set of static, semi-static and dynamic fields is

an email header. Carr teaches that destination address and source address are included in the

header data set. Therefore, the header is considered as an address field.)

-- encoding the message further using one or more alternate compression techniques. ((1)

column 7, lines 13-16: Compression techniques other than LZW can be used. (2) Fig. 6 also

shows that user data of different protocols can be compressed with different data dictionaries.

LZW with different data dictionaries is considered in general to be different compression

techniques.)

    c.      With regard to Claims 22 and 25-26; Carr further teaches machine-readable

medium having program code stored thereon to carry out the steps of Claims 22 and 25-26, the

steps being discussed above. (column 4, lines 33-51)


    3.      Claims 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Unger

et al. (US patent 5,991,713.)

    Unger teaches a method for compressing a message comprising:

    -- replacing character strings within the message with data identifying a location of the

character strings within a spell check dictionary stored on a data processing device. (column 8,

line 61 to column 9, line 54; column 11, lines 6-18; Figs. 8-9; step 210 of Fig. 8; A dictionary of

common English words is a spell check dictionary. The numbers (or tokens) are the locations.)

    -- wherein the message is an email message; (column 1, lines 5-31; column 3, lines 35-

50; Messages sent through an internet are email messages.)

    -- using one or more alternate compression techniques to further compress the message;

(column 11, lines 19-27; Alternate compression techniques are used to compress those that

cannot be compressed with the predetermined dictionaries with supplemental dictionaries.)

-- wherein one of the alternate compression techniques is a Huffman coding technique;

(column 11, lines 19-44; column 1, lines 39-46; The supplemental dictionary associated with the

unusual words are compressed with any known method. One common method is disclosed in

column 1 and is a Huffman coding technique.)

### *Claim Rejections - 35 USC § 103*

4.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that
the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary
skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
invention was made.

5.      Claims 2-3, 10-11, 16, and 23-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Carr as applied to Claims 1, 9, and 22, and further in view of Unger et al. (US

patent 5,991,713.)

a.      Carr teaches the parental Claims 1, 9, 22. Car further teaches that other string

compression algorithms are also applicable in the method explained with Figs. 3-9, namely

compressing header and data with different dictionaries. However, Carr does not teach explicitly

that the code words are based on the frequency associated to the above claims.

Unger teaches a method for compressing a message. In the method, different types of

data are coded with different dictionaries. (column 8, line 62 to column 9, line14) The method

comprises:

-- generating for each dictionary a set of code words based on the frequency with which

character strings represented by the code words are found within the type of data, wherein

character strings which are relatively more common within the type of data are represented by

relatively shorter code words in the set of code words; (column 1, lines 39-46; column 2, lines

23-54; column 9, lines 39-54; Each data of a language and subject is associated with a dictionary.

Shorter token is assigned to a word of high frequency.)

-- initially performing a statistical analysis of character strings found in the type of data to

determine a frequency of occurrence of each of the character strings; (To establish a dictionary

based on frequency requires performing a statistical analysis of character strings in that type of

data.)

-- wherein one of the techniques comprises identifying strings in the first or second fields

based on a location of the strings in a spell-check dictionary. (column 8, line 61 to column 9, line

54; column 11, lines 6-18; Figs. 8-9; step 210 of Fig. 8; A dictionary of common English words

is a spell check dictionary. The numbers (or tokens) are the locations.)

It is desirable to compress efficiently a text message. It is known in the art that Unger's

dictionary can achieve a high degree of compression for each specific dictionary associated with

a special language or subject. It would have been obvious to one of ordinary skill in the art, at the

time of the invention, to replace Carr's dictionaries with dictionaries developed with Unger's

teaching for each of the header data and user data because this replacement improves

compression efficiency. The combination thus teaches the following features:

-- initially performing a statistical analysis of character strings found in the first message

field and the second message field to determine a frequency of occurrence of each of the

character strings;

-- generating the first set of code words based on the frequency with which character

strings represented by the code words are found within the first field;

-- generating the second set of code words based on the frequency with which character

strings represented by the code words are found within the second field;

-- wherein character strings which are relatively more common within the first field are

represented by relatively shorter code words in the first set of code words and character strings

which are relatively more common within the second field are represented by relatively shorter

code words in the second set of code words.


6.      Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr as

applied to Claim 12, and further in view of Avital (US patent application publication

2002/0129125.)

Carr teaches the parental Claim 12. However, Carr does not teach that the second filed is

an address book address field.

Avital teaches that one type of user data that are exchanged between internet users is

address book information. (section 50)

It is desirable to be able to transmit efficiently various information data which are sent

through a message.  It would have been obvious to one of ordinary skill in the art, at the time of

the invention, to use Carr's method to compress and deliver Avital's address book information as

user data because this combination improves transmission efficiency. The combination thus

teaches that the second field is an address book address field.

7.      Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Unger et

al. as applied to Claim 17, and further in view of Ackley (US patent 6,422,476.)

Unger teaches the parental Claim 17. However, Unger does not teach the conversion

recited in Claim 21.

Ackley teaches a method for data compression in which ASCII text is converted to a 6-bit

character format. (column 4, lines 49-65; column 7, lines 24-53)

It is desirable to compress more efficiently a text message that comprises mostly the full

ASCII characters.  It would have been obvious to one of ordinary skill in the art, at the time of

the invention, to apply Ackley's teaching to convert Unger's ASCII text to a 6-bit character

format because the combination improves compression efficiency.

8.      Claims 6-8, 15, and 27-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Carr in view of Unger as discussed above, and further in view of Ackley (US

patent 6,422,476.)

The combination of Carr and Unger teaches method and medium for compression of

email text with dictionaries taught by Unger as discussed above. However, the combination does

not teach the conversion associated with the he above-listed claims.

Ackley teaches a method for data compression in which

-- ASCII text is converted to a 6-bit character format; (column 4, lines 49-65; column 7, lines 24-53)

-- providing one or more 6-bit escape sequences indicating that code following the sequence represents data compressed using a particular compression technique; (codes 47-52 of Fig. 1 and Fig. 8; Codes 47-52 of Fig. 1 are the 6-bit escape codes, each initiating a particular compression technique.)

-- wherein relatively common characters are encoded using 6 bits and relatively uncommon characters are encoded using two successive sequences of 6 bits. (Fig. 4; For example, the common character such as ASCII code 65 (A) is assign a 6-bit 93i word A and the relatively uncommon character such as ASCII code 34 (*) is assign two 6-bit words: 93i word [S3} and 93i word B.)

It is desirable to compress more efficiently a text message that comprises mostly the full ASCII characters. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Ackley's teaching to the method taught by the combination of Carr and Unger, because with converting ASCII text to the 6-bit character format the overall combination improves compression efficiency.

### *Conclusion*

9.     Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-872-9314 for regular

communications and 703-872-9314 for After Final communications. TC 2600's customer service

number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703 305-4700.

Wenpeng Chen
Primary Examiner
Art Unit 2624

June 19, 2003